

HP PDNO 10017782-1
USPTO serial number 10/029,733

REMARKS

Claims 1-24 were presented for examination, and all have been rejected under either 35 U.S.C. § 112 or 102. Claims 1, 9, 12, and 23 are being amended. Claims 8 and 19 are being canceled. A paragraph in the Specification is also being amended to correct a typographical error. In view of the above amendments and the following remarks, reconsideration of the application is respectfully requested.

REJECTIONS UNDER 35 U.S.C. § 112

In paragraph 5, page 2, of the above mentioned Office Action, claims 2, 9-11, 13, 21, and 24 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In paragraph 7, claims 9 and 24 were rejected because there is no antecedent basis for the term "the data link." Claims 10 and 11 were rejected because they depended from claim 9. Claims 9 and 24 are being amended to recite "the communication link," the antecedent of which is on line 3 and 4 for claim 9 and 24, respectively. Withdrawal of the rejection is respectfully requested.

In paragraph 8, claims 2, 10, 13, and 21 were rejected because the recitation of "running the first node and the second node at two different frequencies." The Office Action asserted "[i]t is not clear as to how the nodes are run at two different frequencies. This limitation could have multiple meanings such as the frequency at which a processor is run, the frequency of transactions, the type of connection, etc." The Office Action further asserted "[i]n the remarks, the application has cited the specification in order to support clarity of these claims, however these citations are

HP PDNO 10017782-1
USPTO serial number 10/029,733

irrelevant as they are not limitations of the claims themselves.” As explained in the last Amendment, and it is hereby resubmitted that a node in accordance with embodiments of the invention could be a processor, a computer system, a network device, etc., (Specification page 5, lines 18-20). Those skilled in the art will recognize that two nodes selecting in one or a combination of processors, computer systems, network devices may run at two different frequencies (Specification page 5, lines 11-12). For example, if both the first node and the second node are implemented as two processors running at two different frequencies, then, as claimed, the first node and the second node can run at two different frequencies. Similarly, for another example, if both the first node and second node are implemented as two computers running at two different frequencies, then the first node and the second node, as claimed, can run at two different frequencies, etc. Therefore, the claims are not ambiguous, and, as a result, withdrawal of this 35 U.S.C. § 112 rejection is respectfully solicited.

REJECTIONS UNDER 35 U.S.C. § 102 – Grivna

In paragraph 9, page 3, claims 1-24 were rejected under 35 U.S.C. § 102(b) as being anticipated by US patent number 5,949,799 issued to Grivna (“Grivna”). The rejection of these claims is traversed for at least the following reasons.

Grivna, in transmitting data packet 10 or command 22 uses a serial communication link (col. 2, lines 63-65; col. 6, lines 24-34)) and every data of Grivna is sent over that one *serial* link. In contrast, claim 1 of the invention relates to parallel data that is sent over a communication link *having multiple channels for multiple transactions*. Support for the multiple channels and multi transactions are in the Specification, page 8, line 20, which recites “[i]n one embodiment, communication link includes a plurality of channels . . .,” page 11, lines 5 and 6 recite “. . . at one

HP PDNO 10017782-1
USPTO serial number 10/029,733

time, multiple streams . . . are in transit from node 110-1 to node 110-2, and similarly, multiple streams . . . are in transit from node 110-2 to node 110-1. Further, FIG. 1 shows streams 135-12, 135-21, etc.

In Grivna, "transmission of the packet characters 12 is suspended *on the next character boundary*" (col. 5, lines 62-63, emphasis added), and the inserted command e.g., ACK, therefore has to be inserted on the next character boundary. In contrast, the claimed transaction can be stalled *any time during the transaction* because the Specification, page 7, lines 9-10 recite "a drop packet can be forced into a stream 135 and be sent to a receiving node *at any time during a transaction . . .*" (emphasis added). As a result, the claimed information can be inserted anywhere in the transaction, e.g., without *having to wait till a boundary of a data transaction* (Specification, page 7, lines 12-14) or claim 1, now recites "inserting the information into the identified data *stream without regards to a boundary of the transaction*" (emphasis added).

Amended claim 1 also recites saving a status of the transaction at the time the transaction is stalled and based on the saved status, resuming the transaction. Since this is the features of now canceled claim 8, the rejection of claim 8 is hereby discussed. Grivna's cited paragraph of col. 6, lines 1-3 discloses "[a]fter the command 22 is transmitted, transmission of the packet characters 12 is resumed." Grivna's cited paragraph of col. 7, lines 12-23 discloses "[t]he default mode of operation of the mover 100 is preferably to move data while alternate modes of operation are generally diagnostic in nature. The host interface preferably includes a writable control register and a readable status register to control and monitor the alternate modes of operation. The registers allow the various interfaces to be placed into the various BIST and loopback functions, as well link. Local operations are performed without sending information across the link, while remote operations are

HP PDNO 10017782-1
USPTO serial number 10/029,733

initiated by sending commands . . . across the link to the remote controller.” It is respectfully submitted that the relevancy, if any, of this cited paragraph, to the claimed invention is the word “status.” However, in this paragraph, there is not any disclosure regarding *saving a status of the transaction at the time the transaction is stalled and based on the saved status, resuming the transaction.*

For the foregoing reasons, claim 1 is patentably distinguished from Grivna, and is therefore patentable.

Claims 2-7 depend from claim 1 and are therefore patentable for at least the same reasons as claims 1. Claims 2-7 are also patentable for their additional limitations.

For example, regarding claim 2, Grivna’s cited paragraph of col. 9, lines 40-52 discloses that the data memory changes the “clock domain” of the received data to the same “clock domain” as the transmit data, but does not disclose that the first node and the second node are run at two different frequencies.

Regarding claim 5, there is nothing in Grivna’s cited paragraph of col. 3, lines 48-59 that corresponds to the claimed feature of “sending the information in *a packet normally used for synchronizing* the first node and the second node” (emphasis added).

In dependent claim 9 is patentable for at least the limitations that “the data transaction including a header and a plurality of data pieces; the first node, based on data in the header, counting the data pieces to identify the end of the transaction; the first node counting the packet that includes the information as not part of the data transaction.” Grivna’s cited paragraph of col. 3, lines 19-27 discloses the framing characters 16 indicating the beginning and/or end of the data packet 10, but does not disclose the claimed features as stated.

HP PDNO 10017782-1
USPTO serial number 10/029,733

Claims 10 and 11 depend from claim 9 and are therefore patentable for at least the same reasons as claim 9. Claims 10 and 11 are also patentable for their additional limitations as discussed in claims 2 and 3.

In dependent claim 12 recites various limitations corresponding to claim 1 and is therefore patentable for at least these corresponding limitations.

Claims 13-19 depend from claim 12 and are therefore patentable for at least the same reasons as claim 12. Claims 13-19 are also patentable for their additional limitations as discussed in claims 2-8.

Claim 20-22 recite limitations corresponding to claims 9-11 and are therefore patentable for the same reasons as claims 9-11.

Claim 23 recites limitation corresponding to claim 1 and is patentable for the same reasons as claim 1.

Claim 24 recites limitation corresponding to claim 9 and is therefore patentable for the same reasons as claim 9.

HP PDNO 10017782-1
USPTO serial number 10/029,733

SUMMARY

Pending claims 1-24 clearly present subject matter that is patentable over the prior art of record, and therefore withdrawals of the rejections and consideration of the claims are respectfully solicited.

Respectfully submitted,

Date: 11/15/05

By: 

Tuan V. Ngo, Reg. No. 44,259
IP Administration
Legal Department, M/S 35
Hewlett-Packard Company
P. O. Box 272400
Fort Collins, CO 80527-2400
Phone (408) 447-8133
Fax (408) 447-0854